

## 140 FLOPPY DISK DRIVE

*The CalComp 140 Floppy Disk Drive is a low cost, random access, removable memory device with a capacity of 3.2 million bits of information storage. Featuring 3200 bits-per-inch and 48 tracks-per-inch technologies, the 140 has a 6 msec track-to-track access time and a transfer rate of 250,000 bps. Using a flexible, oxide-coated Mylar disk as the recording medium, the floppy disk drive lowers costs and provides higher transfer rates, increased capacities and, most significantly, greater reliability than previously available medium capacity storage media.*

*Industry standardization and IBM compatibility protects your Model 140 based system and increases acceptability by your customers. Our Floppy Disk Drives are backed by an organization with an excellent track record in product support services whose program is tailored to meet the needs of the OEM.*

*Whatever your applications are, the CalComp 140 offers the ideal solution to your low cost, removable medium storage requirements.*

### FEATURES

**IBM 3740 COMPATIBILITY** allows interchange of diskettes with IBM and other compatible disk drives.

**INDIVIDUALLY SELECTABLE DRIVES** permit daisy-chaining and keep interface connectors and circuits to a minimum.

**A READY INTERRUPT** to the controller when the disk attains operating speed eliminates the need for delay circuitry or polling and notifies the controller of disk changes.

**UNIVERSAL READ/WRITE CIRCUITS** provide for double-frequency or other coding schemes, allowing the OEM to use more efficient or proprietary coding.

**POSITIVE PRESSURIZATION** within the self-contained air system filters and controls air flow, providing greater reliability with cleaner head, media and moving parts.

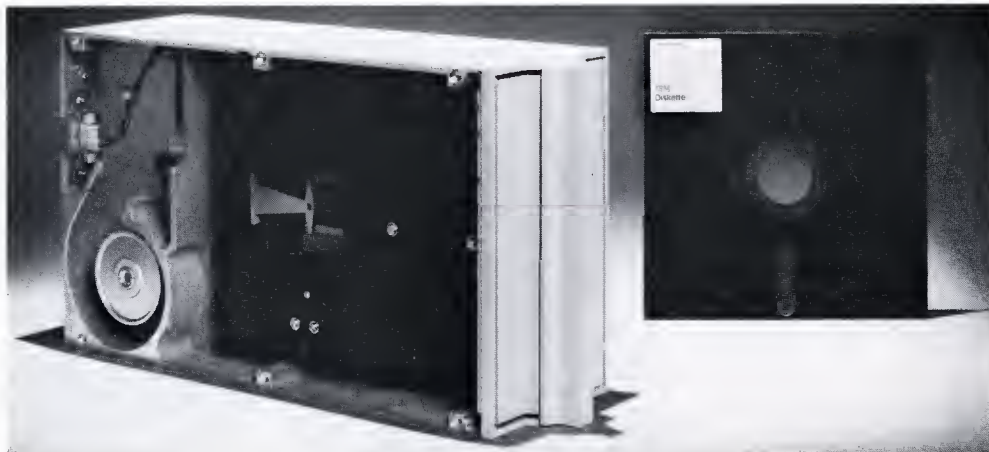
**ELECTRONIC SWITCHING LOGIC** rather than mechanical switches and relays extends MTBF.

**THREE PLANE MOUNTING** does not degrade performance or reliability.

**ONLY TWO DC INPUT VOLTAGES** are required, resulting in a simpler and lower cost controller and power supply.

**USING A LIGHTWEIGHT, RUGGED AND COMPACT CASTING**, the entire unit measures only 4.9 x 8.4 x 15 inches, allowing two units horizontally or three units vertically in a standard 19" RETMA rack.

**USABLE IN A WIDE RANGE OF ENVIRONMENTAL CONDITIONS**, the CalComp 140 brings the economy and speed of disk performance to an increasing number of office and industrial applications.



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# MODEL 140 FLOPPY DISK DRIVE SPECIFICATIONS

## UNFORMATTED CAPACITY

Per Flexible Disk: 3.2M bits/400K bytes  
Per Track: 41.7K bits/5K bytes

## 3740 FORMAT CAPACITY

Per Flexible Disk: 1.9M bits/243K bytes  
Per Track: 26.6K bits/3.3K bytes  
Per Sector: 1024 bits/128 bytes

## TRANSFER RATE

250,000 bits per sec. nominal

## TRACK DENSITY

48 Tracks per inch (0.012 data track width)

## POSITIONING TIMES

Access: 6 msec track-to-track  
Head Stabilization: 10 msec  
Head Load: 16 msec  
Motor Start to Ready: 2 seconds max.

## ROTATIONAL SPEED

360 rpm  $\pm$  2.4% (167 msec/rev.)

## POSITIONING MECHANISM

Stepping Motor; Electrical Detent

## MEDIA

IBM 3740 Diskette or CalComp approved equivalent

## PHYSICAL DIMENSIONS

4.9" High x 8.4" Wide x 15" Deep (add 3" for cable clearance)  
125mm High x 213mm Wide x 381mm Deep (add 76mm for cable clearance)  
Weight — 16 lbs. (18 lbs. shipping weight)  
7.2 kg (8.2 kg shipping weight)

## RELIABILITY

Read Error (Soft): Less than 1 in  $10^9$  bits  
Read Error (Hard): Less than 1 in  $10^{12}$  bits  
Positioning Errors: Less than 1 in  $10^6$  accesses  
MTBF: Exceeds 5,000 hours  
MTTR: Less than 30 minutes  
Component Life: Over 10,000 hours on all components

## POWER REQUIREMENTS

60 Hz: 100, 115, 208, 230 vac  
50 Hz: 100, 208, 220, 240 vac  
DC: +24v at 1.5 amps; +5v at 1.0 amp

## ENVIRONMENTAL REQUIREMENTS

Operating Temperature: 60°F – 100°F (15.6°C – 37.7°C)  
Maximum Gradient: 20°F (11.1°C) per hour  
Humidity: 20% to 80% (no condensation)

## HEAT DISSIPATION

275 BTU/hour



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